

Contextual mapping – the importance of the right base map

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Abstract. The poster will focus on the importance of selecting the right base map in achieving the correct balance for contextual mapping and explore how that base map can be created by applying some colour science to the cartography.

The work concentrates on screen-based media but uses our backdrop mapping products from the Ordnance Survey's OS VectorMap product family that have been designed to transfer quite comfortably to printed media also.

Over the past decade we have witnessed a huge increase in the use of user geographic or location-based data being displayed over maps. Many of the maps that one sees on the internet or on phone and tablet applications - everything from push-pins to heat maps to third party cartographic datasets - fall into this contextual category.

As cartographic designers and developers, we are all trying to find a better way of visualising these overlays but the authors believe that in many instances the larger proportion of blame lies with an inappropriate base map and this poster aims to showcase this theory.

Topographic maps not by definition but by product design are generally too cluttered and too busy a backdrop for displaying further geodata. The colour palette of many topographic maps is too strong for overlaying further information. There may also be other unwanted information already present. At Ordnance Survey for example, our mid-scale raster products are not purely topographic; they often stem from other more thematic product requirements such as walking or tourism. This is normal, if one served up a true topographic map then many customers would want to know where all of the information was, for example geographical object and area names. Leading web map services are also something of a compromise by

catering for both 'full map' and 'backdrop map' audiences and end up with an unhappy compromise both in terms of content and fullness of colour.

The poster will also seek to dissolve the theories that turning topographic maps to greyscale or simply applying a white wash or a transparency to the base map offers a good solution. The latter will have the desired result in reducing perceived colour brightness but the steps between feature hierarchy and the level of content will never be as good as a bespoke base map. This 'bespoke base map' is what we have tried to achieve with our background style.

The poster will explain some of the colour science behind this which is borrowed from the web design and television industries where algorithms consider the measure of luma, or the effective brightness of a colour on screen.

By the use of illustrative examples based upon those found in the real world, the poster will seek to visually prove that a bespoke backdrop style serves not only as a far better base map but also facilitates better communication of the overlain information no matter how well or badly that happens to be symbolised.

Keywords: Cartography, contextual, backdrop, base map, overlays

Quick biographies

Charley Glynn (@charley_glynn) is a Cartographic Design Consultant at Ordnance Survey working on product and service development. He is a keen social networker and open-source geo enthusiast.

Christopher Wesson is also a Cartographic Design Consultant with a keen interest in partnering modern technologies with Ordnance Survey's long tradition of excellence in cartographic design.